What is claimed is:

1. A method for detecting an abnormality of an optical module comprising the steps of:

(a) detecting a value of a current flowing through a specified spot of the optical module;

(b) holding the detected value of the current in a memory;

(c) detecting a value of a current flowing through the specified spot at every predetermined time;

(d) obtaining a differential value between the value of the current held in the memory and the value of the current newly detected; and

(e) generating alarm signal indicating a necessity of preventive maintenance when the obtained differential value exceeds a predetermined threshold value.

2. The method for detecting an abnormality of an optical module according to claim 1,

wherein the value of the current flowing through the specified spot is a value of a current in a power line for supplying power to the optical module.

3. The method for detecting an abnormality of an optical module according to claim 1,

wherein the value of the current flowing through the specified spot is a monitor current value of an optical output of the optical module.

4. The method for detecting an abnormality of an optical module according to claim 1,

wherein the value of the current flowing through the specified spot is a value of a bias current of the transmission light source.

5. The method for detecting an abnormality of an optical module according to claim 1,

wherein the value of the current hold in the memory is a value of a current flowing through the specified spot at the start time of the use of the optical module.

6. The method for detecting an abnormality of an optical module according to claim 1,

wherein the value of the current held in the memory is overwritten to the value of the current which is newly detected in the specified spot when a differential value is obtained.

7. The method for detecting an abnormality of an optical module according to claim 1,

wherein the detected value of the current flowing through the specified spot of the optical module is an average value of currents for the predetermined time.

8. A method for detecting an abnormality of an optical module comprising the steps of:

(a) detecting a value of a current flowing through a specified spot of the optical module;

(b) holding the detected value of the current in a memory;

(c) newly detecting a value of a current flowing through the specified spot at every predetermined time;

(d) obtaining a ratio of a differential value between the value of the current held in the memory and the value of the current newly detected to the value of the current held in the memory; and

(e) generating alarm signal indicating a necessity of preventive maintenance when the obtained ratio exceeds a predetermined threshold value.

9. An apparatus for detecting an abnormality of an optical module comprising:

a current detector which detects a value of a current flowing through a specified spot of said optical module;

a memory which holds the value of the current detected by said current detector;

an arithmetic circuit which obtains a differential value between the value of the current held in said memory and a value of a current newly detected by said current detector; and

an alarm circuit which generates alarm signal indicating a necessity of preventive maintenance when the differential value obtained by said arithmetic circuit exceeds a predetermined threshold value.

10. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein the value of the current flowing through the specified spot is a value of a current in a power line for supplying power to said optical module.

11. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein the value of the current flowing through the specified spot is a value of a current of a transmission light source.

12. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein the value of the current held in said memory is a value of a current flowing through the specified spot, the value of the current being detected by said current detector at the start time of the use of said optical module.

13. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein said current detector detects a value of a current flowing through the specified spot at every predetermined time, and sends out the detected value of the current to said memory.

14. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein said memory includes a first memory and a second memory,

said first memory receives and holds a value of a current from said current detector, and sends out the value of the current held until then to said second memory,

said second memory holds the value of the current sent from said first memory, and

said arithmetic circuit obtains a differential value between the values of the currents held in said first memory and said second

memory.

15. The apparatus for detecting an abnormality of an optical module according to claim 9,

wherein said current detector detects an average value of currents flowing though the specified spot for a predetermined time as a value of a current.

16. An apparatus for detecting an abnormality of an optical module comprising:

a current detector which detects a value of a current flowing through a specified spot of said optical module;

a memory which holds the past value of the current detected by said current detector;

an arithmetic means which obtains a ratio of a differential value between said past value held in said memory and a value of a current detected at present by said current detector; and

alarming means which generates alarm signal indicating a necessity of preventive maintenance when the ratio obtained by said arithmetic means exceeds a predetermined threshold value.